TETRA TECH NUS, INC.
55 Jonspin Road • Wilmington, MA 01887-1020
Tel 978.658.7899 • Fax 978.658.7870 • www.tetratech.com

C-NAVY-05-02-1566

May 15, 2002

Project Number N4152

Mr. James Shafer
Remedial Project Manager
EFA Northeast, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113

Reference: CLEAN Contract No. N62472-90-D-1298
Contract Task Order No. 0833

Subject: Response to Comments on the Draft Report
Sediment Predesign Investigations, Old Firefighting Training Area
Naval Station Newport, Newport Rhode Island

Dear Mr. Shafer:

Attached are responses to comments from NOAA and USEPA on the subject report. NOAA comments were received March 25, 2002 and EPA comments were received April 8, 2002. Comments have not been provided by RIDEM.

Most comments address the determination of the extent of remedial action areas. Others focus on the need for remedial actions in specific areas. Since both subjects pertain more directly to the feasibility study, it is recommended that the Sediment Predesign Investigation Report not be finalized at this time, but that these issues be discussed and resolved with the FS.

If you have any questions regarding this material, please do not hesitate to contact me.

Very truly yours,

Stephen S. Parker
Project Manager

SSP/rp

Enclosure

c: K. Finkelstein, NOAA (1 - w/encl.)
M. Griffin, NSN (4 - w/encl.)
M. Imbriglio, NSN (7 - w/encl.)
K. Keckler, USEPA (3 - w/encl.)
P. Kulpa, RIDEM (4 - w/encl.)
C. Powell, RIF&W (1 - w/encl.)
J. Stump, Gannet Flemming (2 - w/encl)
J. Trepanowski/G. Glenn, TtNUS (w/o encl.)
File N4152-3.2 (w/o encl.)

ATTACHMENT A
RESPONSE TO NOAA COMMENTS ON THE DRAFT REPORT
SEDIMENT PREDESIGN INVESTIGATIONS
FOR THE OLD FIREFIGHTING TRAINING AREA
COMMENTS RECEIVED MARCH 25, 2002

1. NOAA reviewed Figures 4-1 (locations exceeding PRGs) and Figure 4-2 (possible action areas) but could not follow how the shape of the possible action area was drawn. Hence, we are unclear how much sediment actually needs to be removed; it appears from Figure 4-2 that the Navy may be too aggressive in selecting areas for cleanup.

Response: *The rough depiction of the area to be considered for remedial actions was developed by extrapolating points equidistant to the closest sample stations. At station 410, the distance measured to this point developed using the points to the east were used as a limit for the northerly and westerly directions as well. As the text of the report indicates, the Navy agrees that the area around Station SD 410 is only an approximation, and additional sampling is necessary to clearly define this area.*

2. As described, Station 410 exceeds several PRGs of the PAH group. And clearly the shape of the possible action area is an estimate with more data to follow. Although NOAA is very concerned about the removal of eelgrass beds, we are equally concerned about excessive contamination left in place thereby potentially posing as an attractive nuisance to those juvenile organisms that utilize the habitat. Therefore, although the Navy states that the eelgrass beds appear healthy, the impacts to other organisms are quite possible. However, NOAA presently is not advocating the removal of a large amount of eelgrass

Response: *The Navy fully concurs with NOAAs assessment of the situation at Station SD-410. The Navy currently plans to collect additional samples in the vicinity to better describe this area, and hopefully determine if the hot spot is present as a function of the storm drain outfall to the south. Following the receipt and assessment of that data, a determination will have to be reached regarding whether the contaminants pose enough of a potential for exposure to merit interruption of the eelgrass bed. The area and shape presented in the report provide an approximate volume of sediment that may be removed under some action alternatives.*

3. Potential sediment removal at Station #6 should be discussed further. Here, in the area at or below low tide only one exceedence of a PRG was shown – methylnapthylene at 170 ppb. Ecological risk was not identified here due to the measurement of low effects. As stated above, we do not understand the shaded possible action area but also do not believe that this location deserves so much attention.

Response: *The Navy concurs with NOAAs assessment of station OFF-6. This point needs to be discussed in the context of the Feasibility Study Report, which presents different remedial action alternatives.*

ATTACHMENT B
RESPONSE TO USEPA COMMENTS ON THE DRAFT REPORT
SEDIMENT PREDESIGN INVESTIGATIONS
FOR THE OLD FIREFIGHTING TRAINING AREA
COMMENTS RECEIVED APRIL 4, 2002

GENERAL COMMENTS

1. There is only one sample location in the largest eelgrass bed that exceeded the PRGs (SD-410). Based on the available data some area in the vicinity of this site should be considered as a candidate for remediation. The extent would depend on the procedures and assumptions involved in extrapolating from the sample points to an area. Such extrapolation necessarily includes some predetermined level of probability that the point data can usefully describe a larger area. Please explain how the area indicated in the figures as candidates for remediation was determined from the sample locations.

Response: *The rough depiction of the area to be considered for remedial actions was developed by extrapolating points equidistant to the closest sample stations. At station 410, the distance measured to this point developed using the points to the east were used as a limit for the northerly and westerly directions as well. The Navy agrees that the area around SD 410 is only an approximation, and additional sampling is necessary to clearly define this area.*

2. The report states that additional sampling may be required to finalize the extent of PRG exceedance. If additional sampling is needed to fully describe the areas that exceed ecological PRGs within the eelgrass beds, it may be worthwhile to include in the analysis of these samples a limited toxicity testing program similar to that used to develop the PRGs. Such testing may indicate that although a PRG is exceeded, there is no evidence of effects. In this instance it may be possible to avoid impacting the eelgrass beds and the consequent need for restoration. A small-scale toxicity testing program using sediment pore water would be recommended as this would facilitate controlling for ammonia as a confounding factor in toxicity.

Response: *The Navy concurs that such an effort, in concert with testing for ammonia in sediment at stations where toxicity is measured, may provide some helpful information in regards to the usefulness of remedial activities in the eelgrass areas. However, since RIDEM has been adverse to the use of any toxicity data, and focuses only on the sediment contaminant concentrations, it is unlikely that such an effort will have a practical use. However, we would like to discuss this possibility with the other stakeholders.*

3. Shoreline data indicate PRG exceedances in samples collected at the shoreline stations from 1.5 to 2.0 foot depths. The predesign report does not specify depth to bedrock in this area. I recommend taking additional deeper samples (possibly as part of remedial design) to better evaluate the extent of removal that may be required.

Response: *The Navy concurs with this suggestion, and such investigations will likely be undertaken as part of the design stage.*

SPECIFIC COMMENTS

No/Page	Comment
4. p. E-1	The executive summary appears to misrepresent PAH concentrations at sample station SD-410. Only one ecological PRG exceeds at this station (2-methylnaphthalene). The other PAHs detected at station SD-410 below PRGs. Text in the third and sixth paragraphs of the executive summary and associated text in the report may require revision.
Response:	*The Navy concurs, and future discussion of these high PAH concentrations at the outfalls will also describe PRG exceedances.*
5 p. 2-1, §2.0	*Background Information:* The site includes three soil mounds in various locations, but these mounds are not depicted on any of the figures. It would be helpful to include these site features in all figures.
Response:	*The Navy concurs. The figures in the FS have been revised to reflect both features.*
6. p. 2-4, §2.2.2	*Human Health Risk Assessment:* The sediment ingestion rate on which risk was calculated appears to be three orders of magnitude too high. The third paragraph states that sediment ingestion rates for children and adults are 100 grams and 50 grams per day, respectively. The appropriate sediment ingestion numbers should be 100 milligrams and 50 milligrams per day, respectively (*see* 1997 U.S. EPA Exposure Factors Handbook, EPA/600/P-95/002Fa). If this was a typographical error, it simply needs to be corrected. If this is the actual set of values used for risk calculation, all of the ingestion-based risk numbers are incorrect, and all of the on-shore locations will need to be recalculated It is unusual that a site shows human health risk but not ecological risk, as in this report. Typically, the concentrations of contaminants that demonstrated ecological risk are significantly lower than those demonstrating human health risk.
Response:	*The comment is correct, the ingestion rates used in the risk assessment and PRG development are 100 and 50 mg as stated. The typo will be corrected for future submittals.* *The Navy concurs with EPAs assessment of the atypical outcome of the risk values. The residential use scenario for beach sediment does drive the formulation of the remedial action areas, because that scenario (exposure to the beach sediment at residential rates) is so conservative. The Navy would like to propose a risk management discussion to reduce that rate, or raise the PRG for the beach sediments, with the development of the PRAP and ROD.*
7. p. 3-3, §3.2.1, ¶6	The text indicates that grid sample station SD-429 was only sampled from 0-5 inches due to refusal. Figure 3-1, however, shows this location as a "Two Foot Depth Sample Station." Please correct. In addition, Figure 3-1 indicates that grid sample station 426 was only sampled for surface sediment, but the text in Section 3-3 does not indicate any refusal problems at this station. Please clarify.
Response:	*The symbol depicting SD429 will be revised as appropriate. Station SD 426 was not intended to be a two depth station, as shown on the figure.*
8. p. 4-1, §4.1, ¶3	The second paragraph in this section starts with: "The reporting limits for the analytical laboratory were set to be below the PRGs in the laboratory specifications." This implies that the laboratory can arbitrarily set the reporting limits. However, reporting limits are determined by a variety of factors and cannot be arbitrarily assigned. Some

steps can be taken to reduce reporting limits. For example, more sensitive methods can be selected or a larger sample size could be used. Please clarify the text.

Response: *The Navy concurs with this comment. Future analytical work on these sediments will use both approaches to accommodate the necessary detection limits.*

The last two sentences indicate that samples with low solids frequently have a high concentration of organic matter. Please elaborate to clarify the text.

Response: *The text intended to state that the viscosity of the extract was too high due to the high organic content of the sediment.*

9. p. 4-2, §4.1.1, ¶1 The last paragraph in this section indicates that the eastern and western boundaries of the shoreline PRG exceedances have not been identified. The Navy should address this issue in Section 5 and describe how the Arial extent of contamination will be resolved.

Response: *This issue requires additional discussion with the stakeholders. Since the PRGs are so low, an agreement will have to be reached to either adjust the input to the PRG calculation or establish an arbitrary boundary, such as the site boundary to demark the action area for the intertidal zone, or "beach".*

10. p. 4-3, §4.1.3, ¶1 The last sentence in the first paragraph on the page states: "... other PAH detections in this sample were within range ...." Please explain what is meant by "within range."

Response: *The author intended to state that the PAH concentrations detected for benzo(a)anthracene were well below the "1600 U" ug/kg value reported for 2-methylnapthalene and acenapthylene. This indicates that if these two contaminants were present at, for instance 770 ug/kg, they would have been reported as 770 J, but because they were not found at all, the reporting detection limit is quantified at 1600.*

11. p. 4-3, §4.1.3, ¶2 The last sentence in this paragraph states: "... and additional sampling may be warranted west and **south** of SD-410 prior to finalizing the remedial action area." The final sentence of the fifth paragraph on page 4-4 states: "Additional sampling is recommended to the **north** and west of SD-410 to determine the extent of this apparent hot spot." Please correct.

Response: *The Navy concurs with the suggested correction.*

12. Figure E-1 The grid spacing in the eelgrass bed was to be 50'. As such, please discuss why grid samples were not collected between sample stations 460 and 482 and between sample stations 482 and 466.

Response: *Station 409 is between stations 460 and 462. Station 408 is between 462 and 466. There is no station 482. Stations 409 and 408 were scoped as fill-in locations and did not get shifted by the divers to be exactly at the 50 foot points. However, they do provide coverage in these general areas.*

13. Figures E-1 & 4-2 Both of these figures depict areas of potential remedial areas. However, the western coverage near SD-410 is displayed differently. Since these figures are similar and Figure 4-2 provides more information, *i.e.*, sample identifications, it appears unnecessary to have Figure E-1 in the document.

Response: *The Navy concurs, and the suggested revisions will be taken under consideration for future deliverables.*

14. Figures E-1 & 3-1 The symbols used to designate sample locations differ in meaning between these two figures. For example, in Figure E-1, the solid black circle represents a grid sample and in Figure 3-1 they represent "Two Foot Depth Sample Stations." The difference is subtle but somewhat confusing. It would be helpful if the figures were revised so that the symbol usage and meaning are consistent.

Response: *The Navy concurs, and the suggested revisions will be taken under consideration for future deliverables.*

15. Figure 2-4 This figure seems to indicate sampling locations, but the legend does not specify what these locations represent. Please modify the legend to identify these apparent sample locations and to describe when the sample was taken. Please also modify the text at the end of Section 2.2.3 to describe these features of Figure 2-4.

Response: *The Navy concurs, and the suggested revisions will be taken under consideration for future deliverables.*

16. Figure 2-5 This figure uses colored symbols to denote sample locations that exceeded ecological and human health direct exposure PRGs, but there is no symbol for exceedances of human health shellfish ingestion PRGs. Please adjust the figure to show exceedances of PRGs associated with all three of the exposure scenarios.

Response: *The Navy concurs, and the suggested revisions will be taken under consideration for future deliverables.*

This figure identifies some sample locations with filled black circles and others with filled black triangles. The legend must explain these symbols.

Response: *The Navy concurs with the suggested correction.*

17. Figure 3-1 This figure should illustrate locations of grid and supplemental sediment samples However, the legend does not specify which samples are grid and which are supplemental sediment sample stations. Please revise the figure to show these stations.

Response: *The Navy concurs with the suggested correction.*

18. Figure 4-1 The legend for this figure does not define the triangle symbols used to mark some sample stations (*i.e.*, SSD-333 & SSD 334). The legend also does not define the difference between the filled versus hollow circles used to denote sample stations. Please clarify whether filled circles are grid samples and hollow circles are supplemental samples.

Response: *The Navy concurs with the suggested correction.*

This figure does not show the location of sample station OFF-18. This location, as described in Section 4.13, showed exceedances of ecological PRG for 2-methylnaphthalene in 1998. I assume that sample stations 468 and 469 were selected to further evaluate the exceedance at OFF-18. If true, it would be useful for Figure 4-2 to show station OFF-18 in order to evaluate its proximity to 468 and 469.

Response: *The Navy concurs with the suggested correction.*

19. Figure 4-2 — The potential near shore and offshore areas of remediation as shown in this figure do not directly correspond with predesign samples. Was the line drawn to be in the middle of sample coverage? Please explain how these shapes were developed.

Response: *The reviewer should please refer to the response to general comment no. 1. The approach for depiction of the remedial action areas will be explained in future documents.*